

WHAT IS CLAIMED IS:

1. A device for the continuous manufacture of
5 microparticles or nanoparticles from at least one
aqueous phase and one organic phase composed of a
homogenization compartment (1) comprising at least one
inlet (2) for delivering the organic phase, one inlet
10 (3) for delivering the aqueous phase, one mixing system
(4) and one outlet (5), characterized in that
a) the inlet (2) is a hollow tube for delivering the
organic phase and is positioned coaxially with the axis
of said mixing system (4),
b) the tip (6) of said hollow tube is in a volume (A)
15 delimited by the mixing system (4) in the
homogenization compartment (1),
c) the tip (7) of the inlet (3) is in the volume (B)
delimited between the wall (8) of the homogenization
compartment (1) and the end (9) of the mixing system
20 (4), and
d) the outlet (5) is in the top wall of the
homogenization compartment.
2. The device as claimed in claim 1, characterized in
25 that the hollow tube is or is not closed at its tip (6)
and exhibits perforations (10).
3. The device as claimed in claim 2, characterized in
that the number of perforations (10) is from 1 to 20.
- 30 4. The device as claimed in either of claims 2 and 3,
characterized in that the perforations (10) are from
0.01 mm to 1 mm.

5. The device as claimed in any one of claims 1 to 4, characterized in that the mixing system (4) is a rotor (11)/stator (12).

6. The device as claimed in claim 5, characterized in that the rotor (11)/stator (12) comprises at least one row of teeth (13) and that the spacing (14) between the teeth (13) is from 1 to 4 mm.

7. The device as claimed in either of claims 5 and 6, characterized in that the dimensions of the rotor (11)/stator (12) system are such that said system occupies 4% to 40% of the volume of the homogenization compartment (1).

8. A continuous process for the manufacture of microparticles or nanoparticles employing the device as claimed in any one of claims 1 to 7, characterized in that an organic phase comprising at least one active substance, one polymer and one solvent and an aqueous phase comprising at least one surfactant are simultaneously delivered, via the inlet (2), which is a hollow tube, and via the inlet (3) respectively, to the homogenization compartment (1) in which the rotor (11)/stator (12) system has a tangential velocity of 1.5 m/s to 50 m/s, making possible simultaneously the formation of an emulsion of said phases and the extraction of the solvent present in the organic phase, so as to obtain a suspension of particles from which the nanoparticles or microparticles are isolated.

9. The process as claimed in claim 8, characterized in that the organic phase is delivered via the hollow tube which is or is not closed at its tip (6) and which exhibits perforations (10) so as to radially disperse

said phase in the aqueous phase in the homogenization compartment (1).

10. The process as claimed in either of claims 8 and
5 9, in which the nanoparticles are isolated from the particle suspension by discharging said suspension via the outlet (5) of the homogenization compartment (1) into a storage receptacle and by then subjecting said suspension to continuous ultrafiltration.

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11. The process as claimed in either of claims 8 and
9, in which the microparticles are isolated from the particle suspension by discharging said suspension via the outlet (5) of the homogenization compartment (1)
15 into a storage receptacle and by then subjecting said suspension to continuous filtration.